

REMARKS

Claims 16-19 have been withdrawn from consideration. Claims 1, 4, 5, 7, and 14 are amended. Claim 11 is cancelled. Claim 20 has been added. Upon entry of these amendments, claims 1-10 and 12-20 will be pending.

Claim 1 has been amended to incorporate the limitations of claim 11. Support for this amendment can be found in claim 11 as originally filed. Additional claim amendments are discussed below.

New claim 20 has been added. Support for this claim can be found at, e.g., page 21, lines 4-10.

Please cancel claim 11.

Claim Objections

Claim 3 was objected to as purportedly being of improper dependant form for failing to further limit the subject matter of a previous claim. Claim 3 depends from claim 1 and recites "Method according to claim 1 wherein the **radiation-curable precursor** exhibits a Brookfield viscosity at 20 °C of from 1,000 to 150,000 mPa.s." (Emphasis added.) Applicants note that, although claim 1 recites a Brookfield viscosity for the **partially polymerized mixture** (see element (ii)), claim 1 does not limit the viscosity of the radiation-curable precursor (see element (iii)). For at least this reason, Applicants respectfully submit that claim 3 further limits claim 1, and therefore request that the objection to claim 3 be withdrawn.

Claim 4 was objected to as a period was missing from the end of the claim. Claim 4 has been amended to insert the missing period. Applicants respectfully submit that the objection to claim 4 has been overcome and should be withdrawn.

§ 112 Rejections

Claims 1-15 stand rejected under 35 USC § 112, second paragraph, as purportedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. According to the Patent Office, in claim 1, the phrase

“essentially solvent-free” is vague and indefinite. Claim 1 has been amended to clarify that the essentially solvent-free mixture comprises less than about 20 weight percent solvent. Support for the amendment can be found at, e.g., page 10, lines 22-32.

The Patent Office suggested changing “selected from the group comprising” to “selected from the group consisting of” in claims 5, 7, and 14. Applicants thank the Examiner for the suggestion, and have amended claims 5, 7, and 14 accordingly.

In summary, Applicants submit that the rejections of claims 1-15 under 35 USC § 112, second paragraph, have been overcome, and that the rejections should be withdrawn.

§ 103 Rejections

Claims 1-15 stand rejected under 35 USC § 103(a) as purportedly being unpatentable over Ellis (US 5,637,646).

Independent claim 1 requires, *inter alia*, partially polymerizing a mixture to provide a partially polymerized mixture exhibiting a degree of conversion of monomers to polymer of between 30 – 60 wt. % with respect to the initial mass of the monomers prior to polymerization. (See claim 1, element (ii).) Claim 1 also requires adding one or more free-radical radiation polymerization initiators to this partially polymerized mixture to provide a radiation-curable precursor, applying the resulting radiation-curable precursor to a substrate, and further polymerizing the radiation-curable precursor. (See claim 1, elements (iii)-(v).)

Citing various passages, the Patent Office asserts that Ellis discloses each of the steps of claim 1 of the present application. Applicants respectfully submit that when these passages are read in their respective contexts, it is clear that Ellis fails to provide the description, teaching, or suggestion necessary to combine them to arrive at the method of claim 1. In addition, features recited in the steps described in Ellis further distinguish the method of the present disclosure from that described in Ellis.

For example, Ellis describes one step in a batch process that results in a polymer content of 30-80% by weight. (See, col. 17, line 46-51.) However, Ellis goes on to state that if the polymerization is stopped at this point, the unreacted monomer can be stripped from the reaction mixture or further polymerized in other equipment. (See col. 17, lines 52-54.)

These further polymerizations of Ellis are described at col. 18, line 11 - col. 19, line 22 as one or more essentially adiabatic reaction cycles performed as batch processes. In fact, the Patent Office cited a portion of this description (col. 18, lines 37-38) for the proposition that Ellis describes “adding additional initiator to the partially polymerized mixture.” (See Office Action mailed March 17, 2006; ¶ 7.) However, reading the cited passage in its full context (see, col. 18, lines 20-56) at best, Ellis describes adding additional initiator in the context of additional batch reactions. Therefore, although Ellis may describe adding initiator to a partially polymerized mixture, the Patent Office has failed to show how Ellis describes, teaches, or suggests applying such a mixture to a substrate and further polymerizing it by subjecting it to actinic irradiation, as required by claim 1.

In addition, Applicants note that the Patent Office cited col. 19, lines 25-28 for the proposition that Ellis describes applying the mixture to a substrate. (See Office Action mailed March 17, 2006; ¶ 7.) However, Applicants respectfully submit that the Patent Office has failed to show how Ellis describes, teaches, or suggests the addition of one or more free-radical radiation polymerization initiators to the solutions that are applied to substrates. In addition, Ellis requires that the copolymers made for PSA be “dissolved in ethyl acetate 50% by weight of polymer plus ethyl acetate” prior to coating them; therefore a significant amount of solvent is present. (See col. 19, lines 26-36.)

In summary, Applicants respectfully submit that, although isolated passages of Ellis may appear to describe elements similar to those required by claim 1, if read in context, these passages fail to describe, teach, or suggest the overall method of claim 1. For example, the Patent Office has failed to show how Ellis describes, teaches, or suggests adding one or more free-radical radiation polymerization initiators to a partially polymerized mixture having a degree of conversion of monomers to polymer of between 30 – 60 wt. % with respect to the initial mass of the monomers prior to polymerization to provide a radiation-curable precursor, applying this radiation-curable precursor to a substrate, and further polymerizing the radiation-curable precursor by subjecting it to actinic irradiation to provide a pressure-sensitive adhesive. (See, e.g., claim 1.) For at least these reasons, the rejection of claim 1 under 35 USC § 103(a) as being unpatentable over Ellis is unwarranted and should be withdrawn.

Claims 2-10 and 12-15 each add additional features to claim 1. Claim 1 is patentable for at least the reasons given above. Thus, claims 2-10 and 12-15 are likewise patentable.

New claim 20 adds additional features to claim 1. Claim 1 is patentable for at least the reasons given above. Thus, new claim 20 is likewise patentable.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested, and allowance of claims 1-10, 12-15, and 20, as amended, at an early date is solicited.

Respectfully submitted,

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